

Work Order ID 158883***158883***

Page 1

Monday, April 03, 2017 4:19:26 PM

Item ID: 647.3912 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Breakaway Tip Wirestrike for Wire Strike Kit
Start Date: 4/5/2017 Start Qty: 6.00 ***6*** Cust Item ID:
Required Date: 4/21/2017 Req'd Qty: 6.00 ***6*** Customer:
Reference: SCHEDULED

Approvals: Process Plan: DAS 21 Date: APR 04 2017 Tooling: _____ Date: _____ Run Start ***NR1***
QC: 9-89 Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
647.3900	C2

100

0.00

100

BAND SAW

Bandsaw

Memo

0.00

Jeaspa Bandsaw

Cut Blank at 20.000"

*** ONE BLANK MAKES TWO PARTS***

3

Ø

DAS
20
9-89

17-04-08

110

1.81

110

HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

1.87

HAAS CNC vertical machine #1

1-Machine per folio FB309

DWG REV: CFOLIO REV: 11

2- deburr and break all sharp edges

6

Ø

DAS
20
9-89

17-04-08

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐		
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐		
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐		
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐		
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐		
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐		
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐		
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐		
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐		
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐		
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____					
Misidentified ☐	Past Due ☐						

Work Order ID 158883

Monday, April 03, 2017 4:19:26 PM

158883

Page 2

Item ID: 647.3912

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Breakaway Tip Wirestrike for Wire Strike Kit

Start Date: 4/5/2017 Start Qty: 6.00

6

Cust Item ID:

Required Date: 4/21/2017 Req'd Qty: 6.00

6

Customer:

Reference: SCHEDULED

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

120

QC2- Inspect parts off machine FAI/FAIB

0.00

120

QC

Memo

0.06

Quality Control

6

Ø

DAS
20
9-89

17-04-09

130

QC8- Inspect parts - second check

0.00

130

QC

Memo

0.12

Quality Control

D.A. 17-04-09

6

Ø

DAS
08
9-89

140

Outsource process-Anodize per QSI017 4.1.10.1

0.00

140

Outsource4

Memo

1,080.00

Outsource process - Anodize

Issue P/O to ATG : 36011

1- Black Anodize as per Dwg 647.3900

2- PRIME AS PER DWG, SEE NOTE #9

Certification of Conformity is required

6

APR 19 2017

DAS
13
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
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Misidentified ☐	Past Due ☐																																																																

DQA: _____ Date: _____



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QA Closed: _____ Date: _____

Work Order update only ☐

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							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		

Root Cause				FAULT CATEGORY			
Environment ☐		No Re-verification ☐		Pressure/Forced ☐		Temperature/Cure ☐	
Design ☐		Operator ☐		Bending ☐		Set-up ☐	
Doc/Data ☐		Offset/Setup ☐		Centre Not Concentric ☐		BOM/Route ☐	
Equip/Tooling ☐		Supplier ☐		Cracks ☐		Broken/Damage/Defect ☐	
Handling/Pre ☐		Training ☐		Crimp/Kink/Ripple/Wave ☐		Inspection Incomplete/Unqualified ☐	
Material ☐		Use for Testing ☐		Cuffs ☐		Contamination ☐	
Internal Transport ☐		Poor Information ☐		Crushing ☐		Countersink ☐	
Tribal Knowledge ☐		Rushing ☐		Heat Treat ☐		Cut Too Short ☐	
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Past Expiry Date ☐		Manufacturing Process ☐		OTHER : _____			
Misidentified ☐		Past Due ☐					

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Page 4

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Revision ID: Stop ***NS2***
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Start Date: 4/5/2017 Start Qty: 6.00 ***6*** Cust Item ID:
Required Date: 4/21/2017 Req'd Qty: 6.00 ***6*** Customer:
Reference: SCHEDULED

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190	QC21- Final Inspection - Work Order Release	0.00							
190									
QC	Memo	0.60							
Quality Control									

DAS
21
9-89

MAY 12 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____		
Description Work Order Deviation				Disposition					

Root Cause			FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
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Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence
Past Expiry Date	☐	Manufacturing Process	☐	OTHER :						
Misidentified	☐	Past Due	☐							

Picklist Print

Monday, April 03, 2017 4:19:25 PM

Page 1

Work Order ID: 158883

158883

Parent Item: 647.3912

647 3912

Parent Item Name: Breakaway Tip Wirestrike for Wire Strike Kit

Start Date: 4/5/2017

Required Date: 4/21/2017

Start Qty: 6.00

Required Qty: 6.00

Comments: IPP REV.A NEW ISSUE JFS 14/05/29 VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

M7075T6B0.375X6.000

Purchased

No

100

f

5.1600

0.834

5.267368

M7075T6B0.375X6.000

**

5.124'

DAS
20
9-89

17-04-08

7075-T6 Plate 0.375" X 6.000", QQ-A 250/12

Location

Loc Qty

Loc Code

MAT005

5.16

m135187

0.87

m136344

4.29

3.332'

M7075-T6

0.375" X 8.000"

M133215

1.792'

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
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Misidentified ☐	Past Due ☐																																																																



APICAL INDUSTRIES, INC.
dba DART AEROSPACE

TRANSACTION CODES (TC):
A-ADD C-CREATE
R-REVISE D-DELETE

ENGINEERING CHANGE NOTICE NO. 04948

SHEET 1 OF 2

DWG NO. 647.3900

REV: C

PREPARED BY: M. ANDECK

DATE: 05/04/15

EFFECT ON DWG
☐ INC. ☒ UNINC.

DWG TITLE: DEFLECTORS

APPROVED BY:

ENGR

Brava

MFG

Dawn Dade

QC

Bill

EFF:

CURRENT ORDER

ECR:

D-15-01

REASON: REVISED TOLERANCE AND NOTES

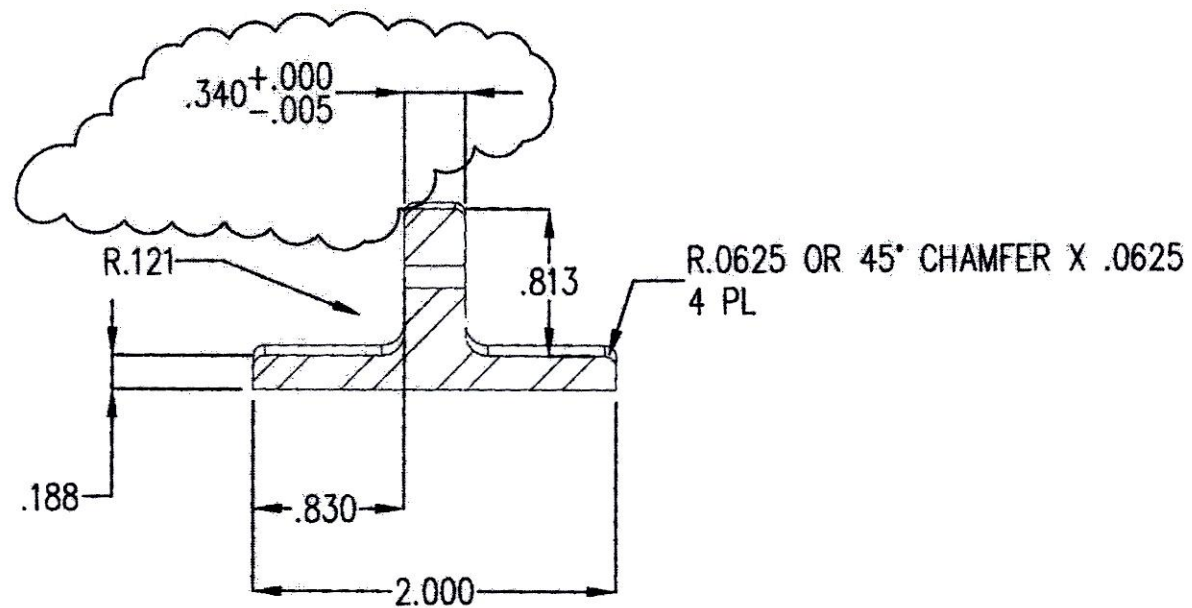
SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 158883 *mcg*
17-04-04

NOTES:

- 1 MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12.
- 2 FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK;
3. DEBURR AND BREAK ALL SHARP EDGES.
4. IDENTIFY IAW MPP-120.
- 5 APPLY F/N 3 AS REQUIRED TO ALL FAYING SURFACES OF F/N 6, 7 & 8 UPON ASSY.
- 6 MAXIMUM OR MINIMUM DIMENSION AFTER FINISH.
7. .0625 HOLE MAY BE ADDED FOR FINISHING PURPOSES
- 8 FINISH: PRETREAT PR-148 ADHESION PROMOTER, PRIME IAW MIL-P-23377J, TYPE I, CLASS N; 1-2 MIL MAX. APPLY FINISH AFTER ASSEMBLY.
- 9 FINISH: PRETREAT PR-148 ADHESION PROMOTER, PRIME IAW MIL-P-23377J, TYPE I, CLASS N; 1-2 MIL MAX.
- 10 MATERIAL: ALUMINUM 2024-T3 PER AMS-QQ-A-250/4.

SHEET 1, ZONE B1 IS:

11	R	647.3917	2			DOUBLER		
F/N TC	PART NUMBER	.3903	.3902	.3901	QTY	DESCRIPTION	MATERIAL	SPECIFICATION
DOCUMENTS EFFECTED:						CHANGE CATEGORY	DER REVIEW REQUIRED	
☐ PATTERN ☐ MDL ☐ INSTALL INSTRU ☐ ICA ☒ BOM						☐ MAJOR ☒ MINOR	☐ YES ☒ NO	



SECTION AT-AT

SHEET 11, ZONE C1 IS:

APICAL

INDUSTRIES, INC.

ENGINEERING CHANGE NOTICE NO.

04556

SHEET 1 OF 2

DWG NO. 647.3900

REV: C

PREPARED BY D. MEJIA

DATE: 06/10/2014

EFFECT ON DWG
☐ INC. ☒ UNINC.

DWG TITLE: DEFLECTORS

APPROVED BY: ENGR

MFG

QC

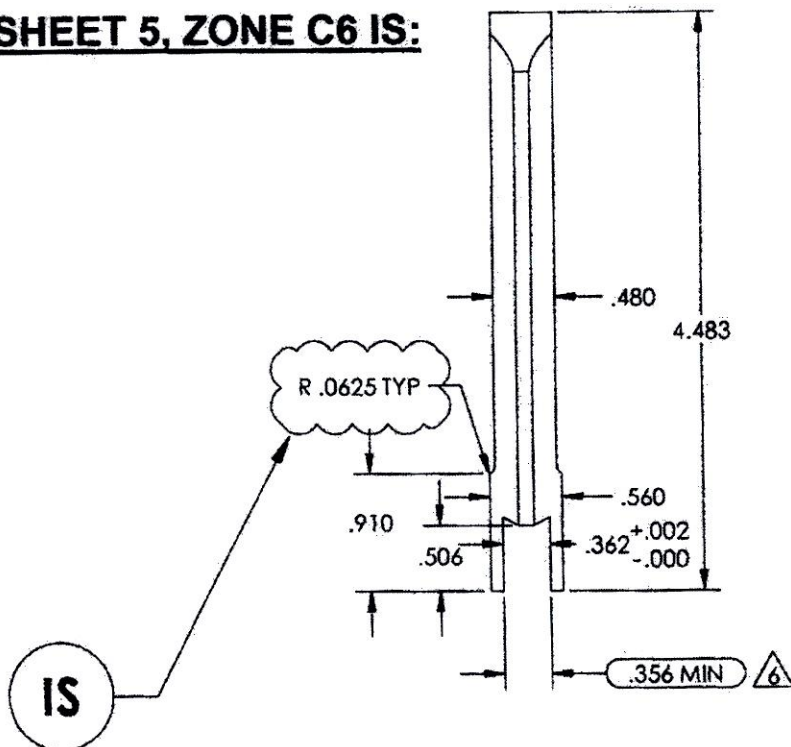
EFF. NEXT ORDER

TRANSACTION CODES (TC):
A-ADD
R-REVISE
C-CREATE
D-DELETE

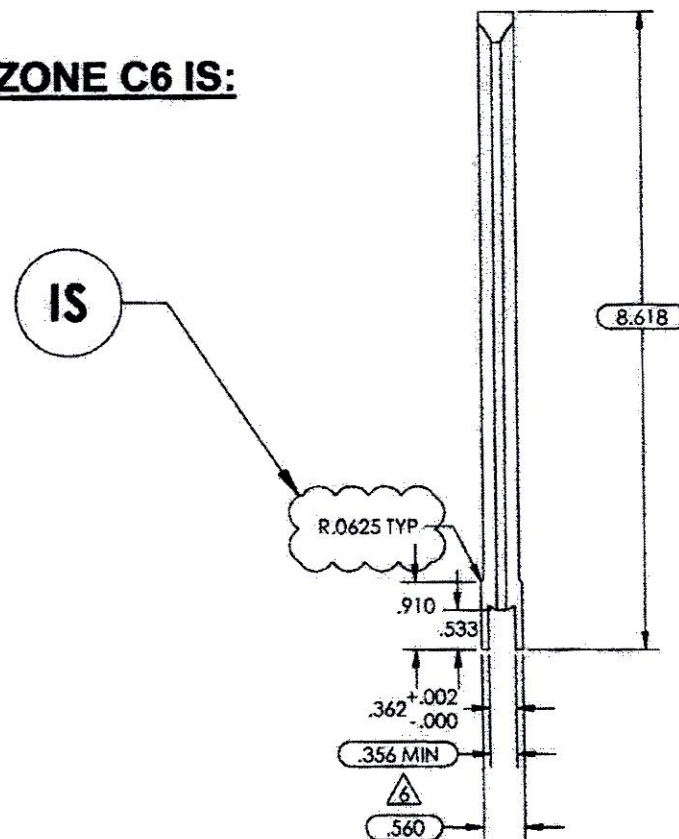
REASON: CHANGED P/N, DIMENSIONS & REVISED BOM

ECR: D-14-04

SHEET 5, ZONE C6 IS:

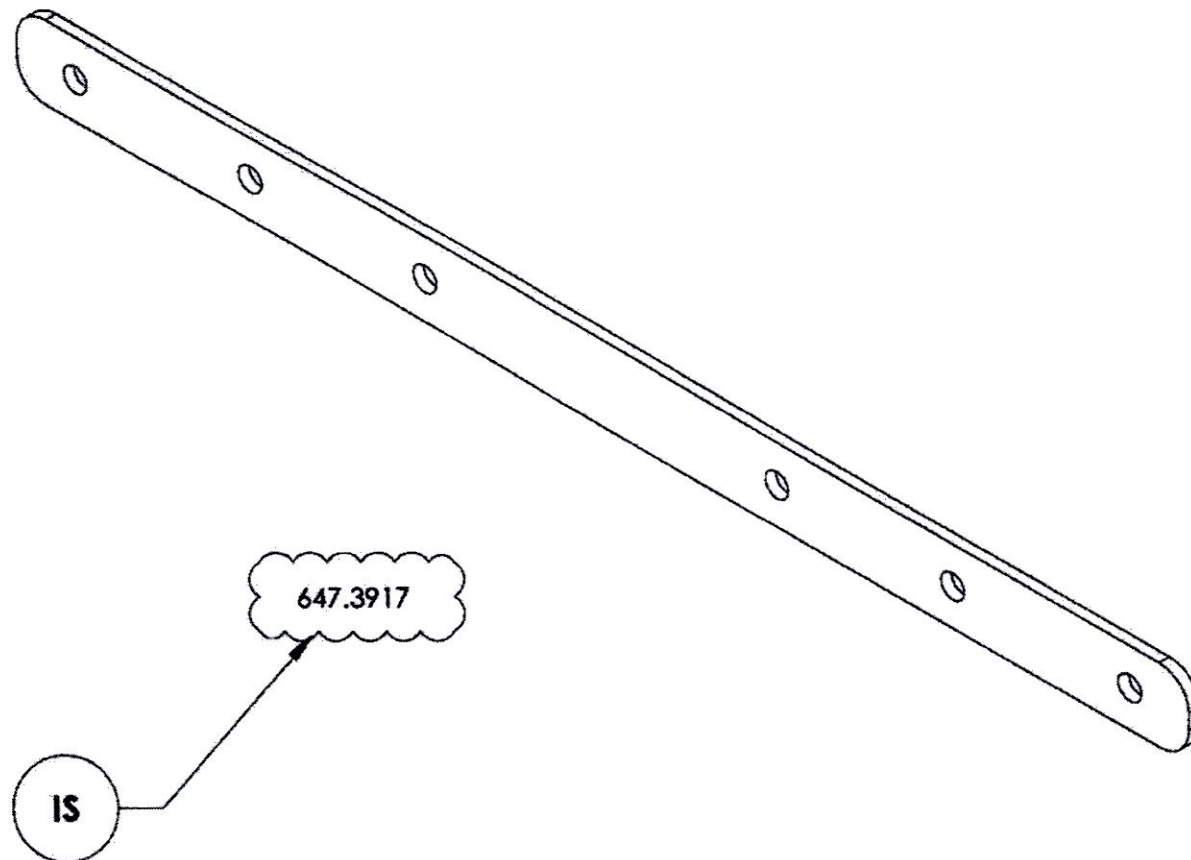


SHEET 6, ZONE C6 IS:



SHEET 1, BOM IS:

11	R	647.3917	2			DOUBLER		
F/N	TC	PART NUMBER	QTY			DESCRIPTION	MATERIAL	SPECIFICATION
DOCUMENTS EFFECTED:							CHANGE CATEGORY	
							DER REVIEW REQUIRED	

SHEET 12, ZONE B5 IS:

9 FINISH: PRETREAT PR-148 ADHESION PROMOTER,
PRIME IAW MIL-P-23377J, TYPE I, CLASS N;
1-2 MIL MAX.

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	LAST PROTOTYPE RELEASE: PR1		N/C
N/C	INITIAL RELEASE	09/10/09	P. BRAVO
A	INCORPORATED ECH 02044, 03539 & 03595	07/24/12	P. BRAVO
B	INCORPORATED ECH 04025	08/02/13	P. BRAVO
C	INCORPORATED ECH 04038, 04085 & 04250	11/18/13	P. BRAVO

04556, 04948

				12	601.3072	RIVET	CR3213 6-9		
				11	647.3917	DOUBLER			
				10	647.3916	DEFLECTOR, UPPER HALF	△		△
				9	647.3915	DEFLECTOR, LOWER HALF	△		△
				8	647.3914	BREAKAWAY TIP LONG	△		△△
				7	647.3913	BREAKAWAY TIP MEDIUM	△		△△
				6	647.3912	LOWER DEFLECTOR	△		△△
				5	647.3911	212 UPPER DEFLECTOR	△		△△
				4	647.3910	412 UPPER DEFLECTOR	△		△△
	A/R	A/R	A/R	3	601.2045	RTV, LOCTITE 598			△
		3	2	2	601.3074	RIVET	MS20470AD 6-12		
				1		DELETED			
	X				647.3903	DEFLECTOR ASSY			△
		X			647.3902	LOWER DEFLECTOR ASSY HIGH			
			X		647.3901	LOWER DEFLECTOR ASSY LOW			
.3903	.3902	.3901		FIND #	PART #	DESCRIPTION	MAT'L	SPEC	
QTY				PARTS LIST					
NEXT ASSY (S)				APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300 DEFLECTORS					
647.3800									
ORIGINAL DATE 09-10-09 DRAWN BY CHECKER CUCHEK D. BARKER DRAWING APPROVAL P. BRAVO NO. 000 CONTRACT NO.									
INLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES UNLESS ARE: 2 PLACE DECIMALS ± .01 3 PLACE DECIMALS ± .005 ANGLES ± .5°									
REV.	CAGE CODE	DWG. NO.	SCALE				NONE		1 OF 12
	B	07N26	647.3900						

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.125 X 45.0° TYP

SECTION B-B

Ø.177 THRU 3PL

.266 X 17.9°

DETAIL A

.045

.603

R.915

.923

2.110±.002

4.220±.002

R.279 R3.406

15.896

15.304

15.046

B

B

Ø.189

40.2°

6.446

.312

0

18.502

18.127

35.8°

10.702

8.599

6.253

1.700

.777

0

.700

.035 X 45.0° TYP

.340^{+.000}

-.002

6 .346 MAX

DETAIL C

.375

15.896

C

647.3911

ORIGINAL DATE
(MM/DD/YYYY) 06-10-09
DRAWN BY
D. DICKINSON
CHECKED BY
P. BRAY
DATE
06-10-09
CONTRACT NO.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
2 PLACE DECIMALS ±.01
3 PLACE DECIMALS ±.005
ANGLES ±.5°

APICAL INDUSTRIES

2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760)724-5300

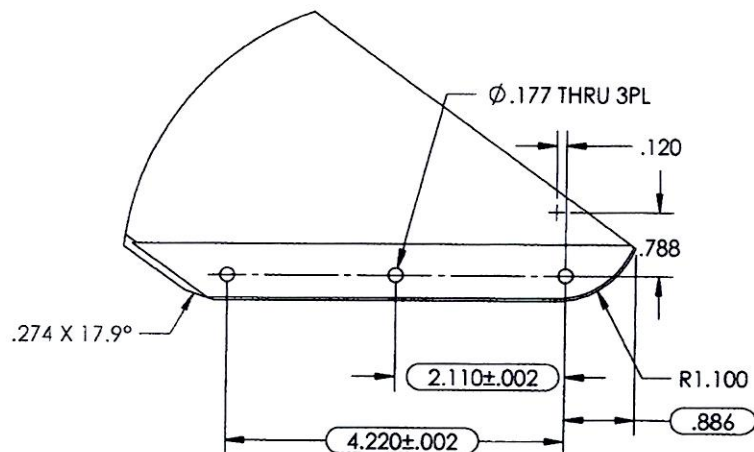
DEFLECTORS

SHEET	CAGE CODE	DWG. NO.	REV.
B	07M26	647.3900	C
SCALE NONE			SHEET 2 OF 12

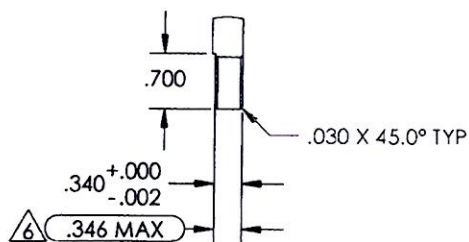
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.125 X 44.9°

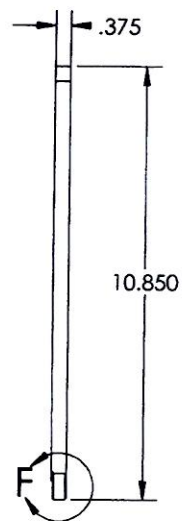
SECTION E-E



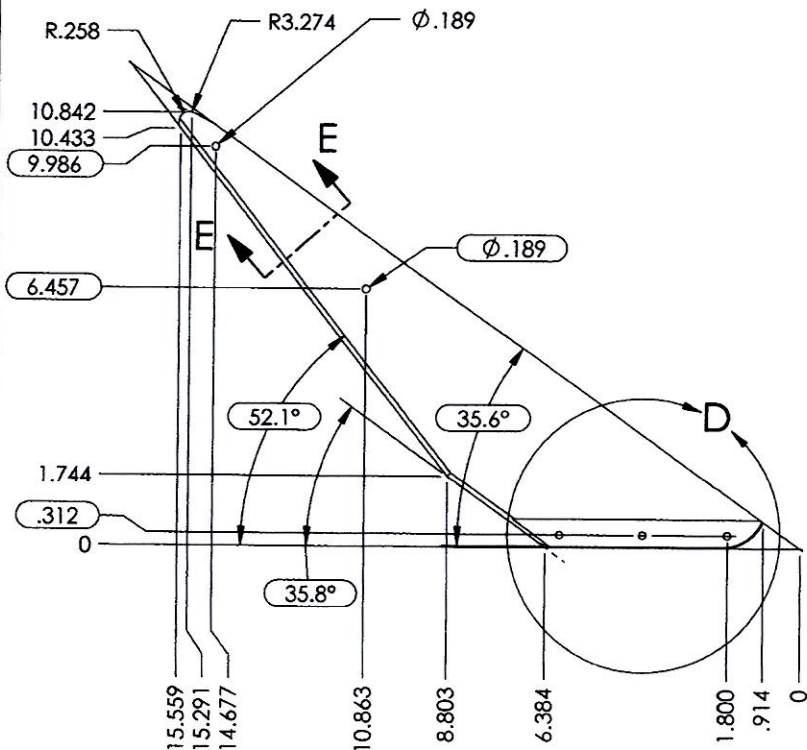
DETAIL D



DETAIL F

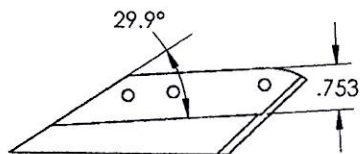


647.3910

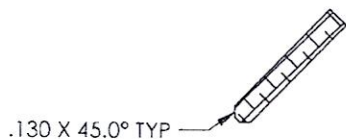


ORIGINAL DATE APR 04-1991		BY: J.SCHUR	
DRAWN BY: J.SCHUR		CHECKED BY: J.BARTER	
DRAWING APPROVAL P. BRAYO		CONTRACT NO.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°		REV B	REV C
CAGE CODE B		DWG. NO. 647.3900	SCALE: NONE
SHEET 3 OF 12		DEFLECTORS	

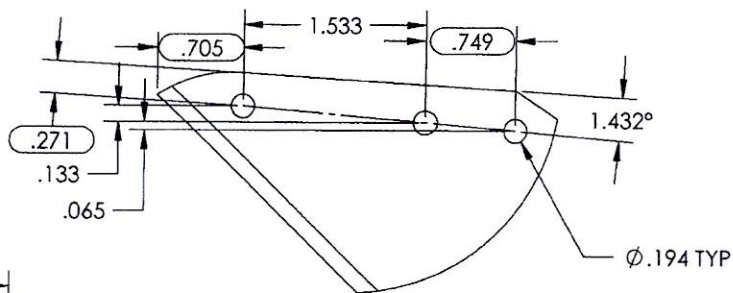
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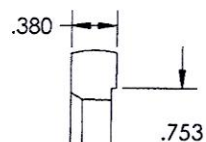
SECTION L-L



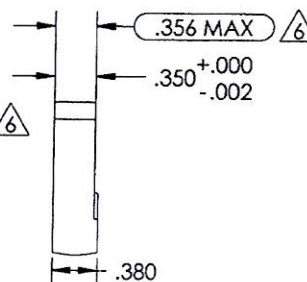
SECTION M-M



DETAIL H



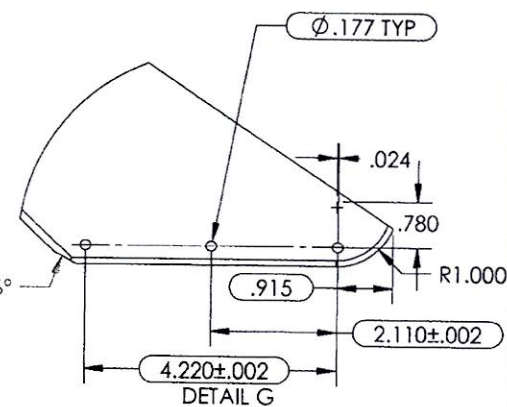
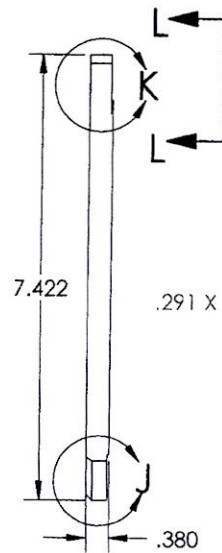
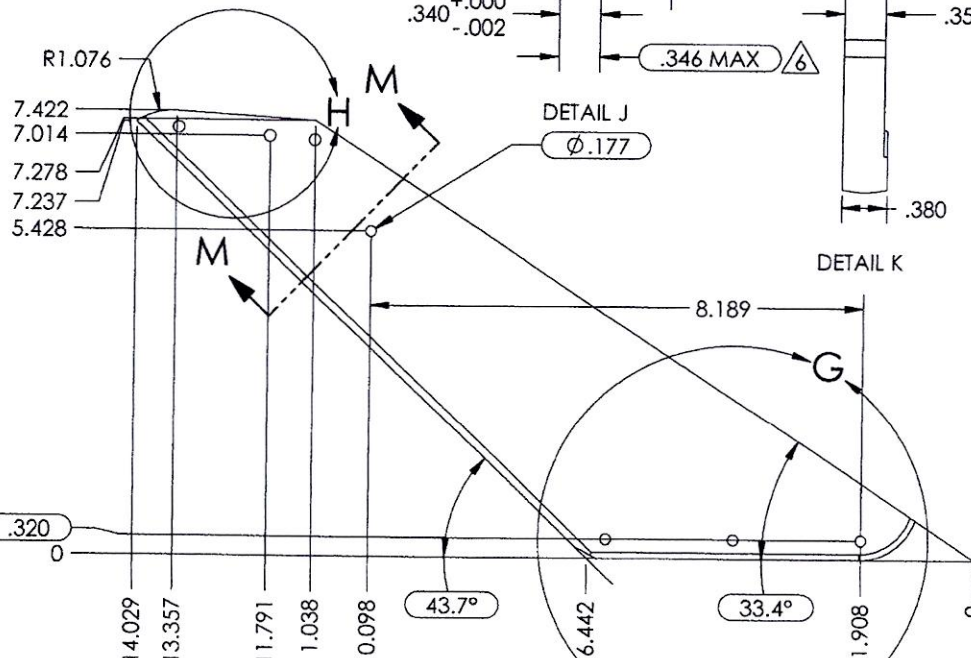
DETAIL J



DETAIL K



647.3912



DETAIL G

ORIGINAL DATE (MO/DA/YR)		BY: JSC		CHECKED: JSC	
DRAWN BY: JSC		DESIGNED BY: JSC		APPROVED BY: JSC	
CONTRACT NO.		SHEET		REV.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ± .01 3 PLACE DECIMALS ± .002 ANGLES ± .5°		CAGE CODE		DWG. NO.	
		B		07M26	
		SCALE		NONE	
		SHEET		4 OF 12	

APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760) 724-5300

DEFLECTORS

647.3900

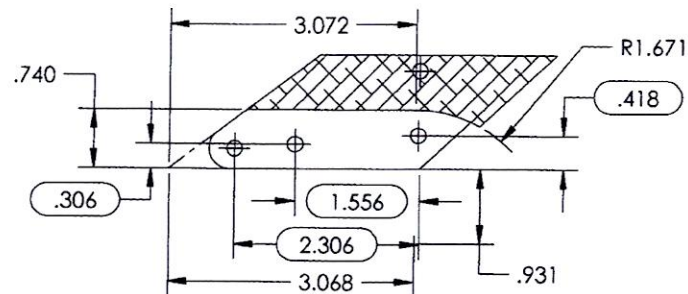
REV. C

SHEET 5 OF 12

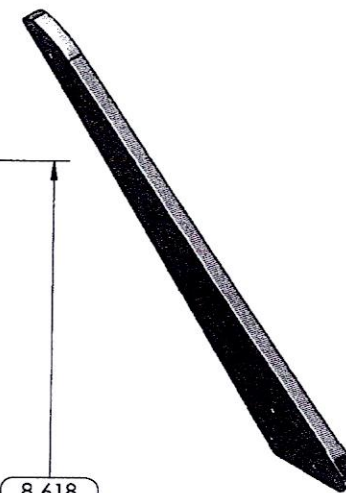
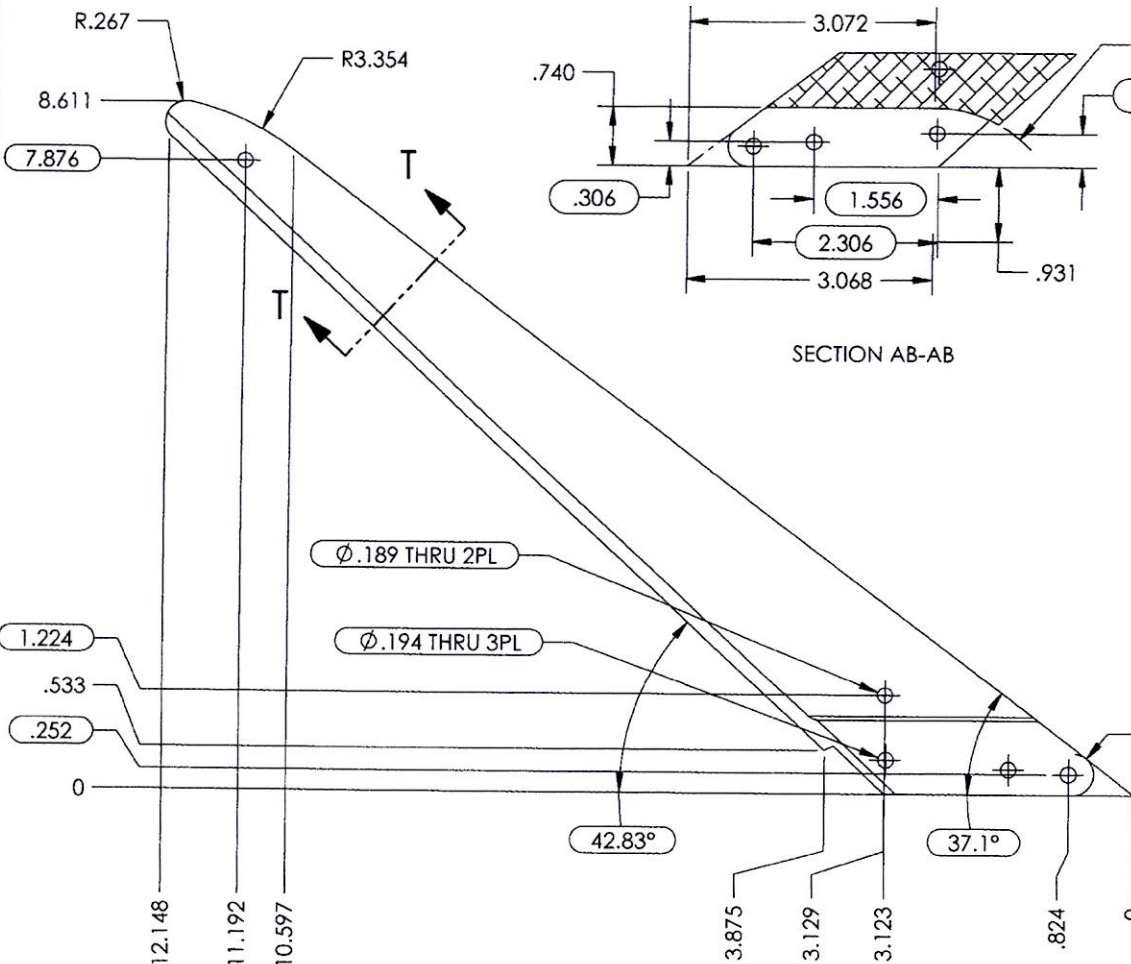
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.175 X 45.0° TYP

SECTION T-T

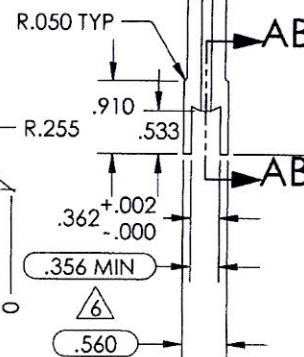


SECTION AB-AB



647.3914

8.618



ORIGINAL DATE 08/10/00
 DRAWN BY D.SCHUR
 CHECKED J.BARNER
 DRAWING APPROVAL
 P. BRAVO
 CONTRACT NO.

APICAL INDUSTRIES
 2608 TEMPLE HEIGHTS DR.
 OCEANSIDE, CA. 92056-3512 (760)724-5300
 DEFLECTORS
 DWG. NO. 647.3900
 REV. C
 SCALE NONE SHEET 6 OF 12

UNLESS OTHERWISE SPECIFIED
 DIMENSIONS ARE IN INCHES
 TOLERANCES ARE:
 2 PLACE DECIMALS ±.01
 3 PLACE DECIMALS ±.005
 ANGLES ±.5°

1 2 3 4 5 6 7 8

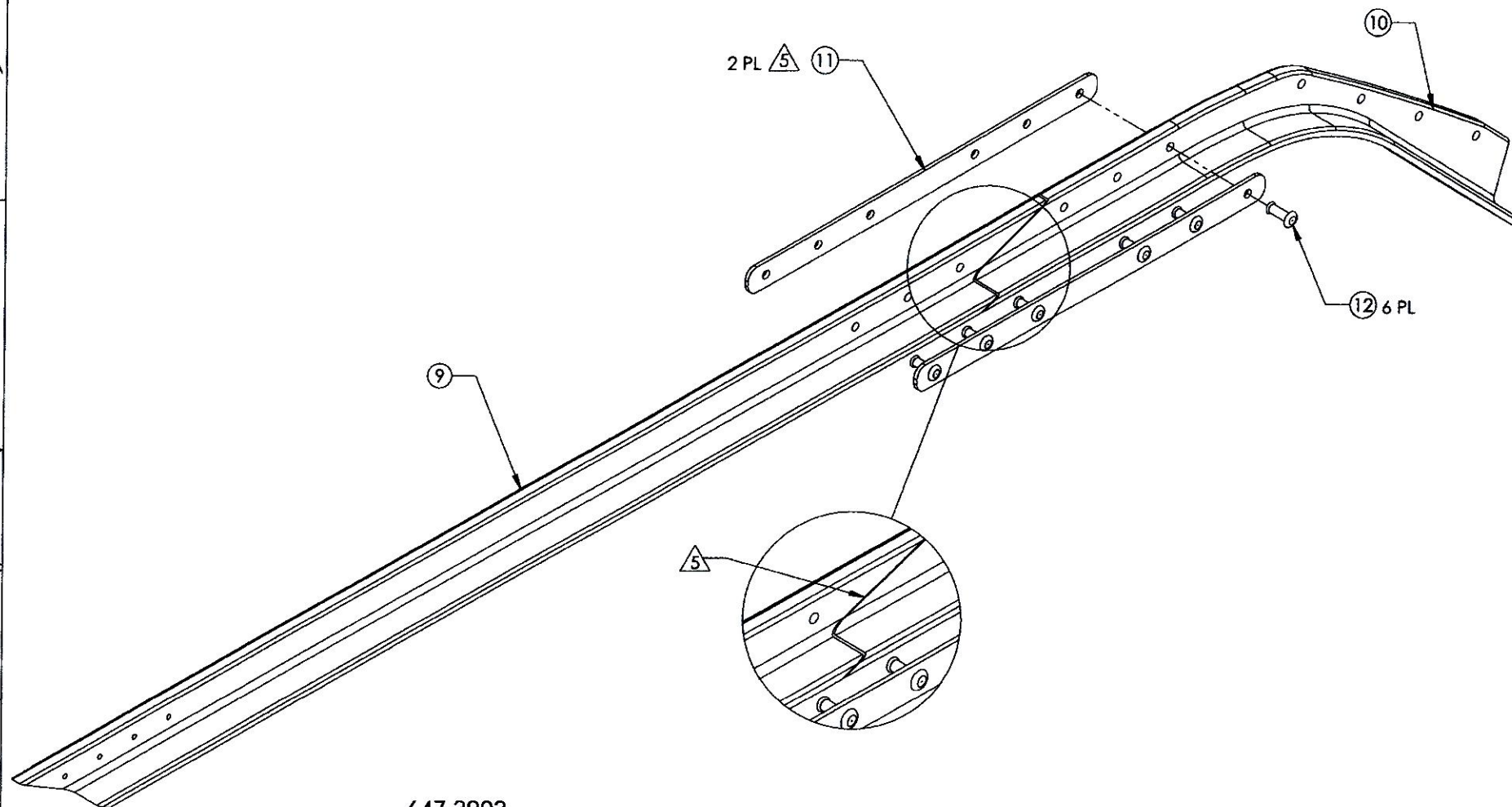
A

B

C

D

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647.3903

ORIGINAL DATE 10-10-78		APICAL INDUSTRIES	
DRAWN BY D. SCHUP		2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
CHECKED BY D. SCHUP		DEFLECTORS	
DRAWING APPROVAL P. BRAYO		DWG. NO. 647.3900	
CONTRACT NO.		REV. C	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°		SCALE NONE	SHEET 7 OF 12

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0 1.732 6.480^{+0.010}/_{-.000} 42.760^{+0.010}/_{-.000} 9.000 33.205 37.040 42.040 42.171 42.784 0 .171 .271 .646 1.000 2.699 4.389 5.054 6.480

0 1 2 3 4 5 6 7 8

A B C D

ORIGINAL DATE 10/01/79		DESIGNED BY J. B. BAKER	
DRAWN BY J. B. BAKER		CHECKED BY J. B. BAKER	
DRAWING APPROVAL J. B. BAKER		CONTRACT NO.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°			

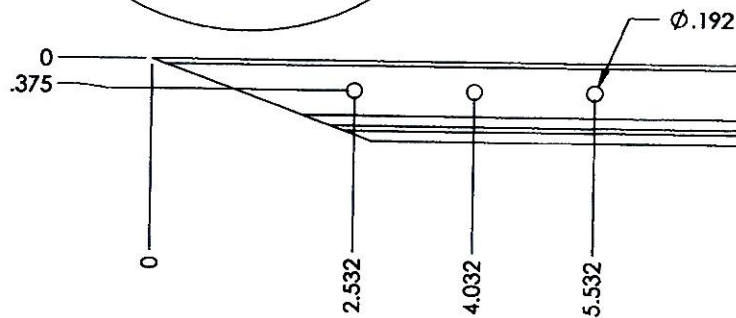
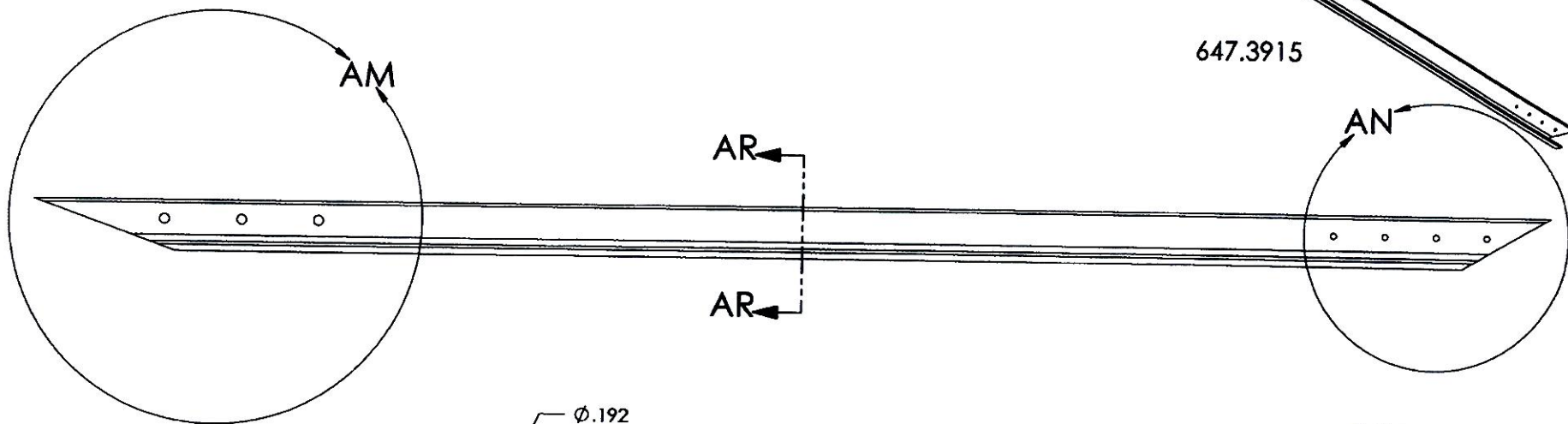
APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760)724-5300

DEFLECTORS

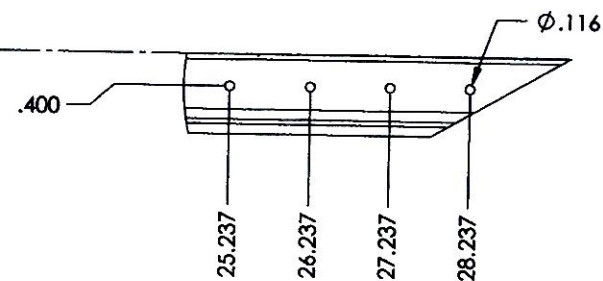
SER B	CAGE CODE 07M426	DWG NO. 647.3900	REV. C
SCALE NONE			SHEET 8 OF 12

ORIGINAL DATE APC-DA-7876	NO-NOON		
DRAWING BY DSCOMP	FOR DBANBER		
DEPARTMENT APPROVAL BY DATE			
CONTACT NO.			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE ± .010 2 PLACE DECIMALS ± .001 3 PLACE DECIMALS ± .0001 ANGLES ± .5°			
SER.	CAGE CODE	QWG NO.	REV.
B	07MAE	647.3900	
SCALE NAME			SHEET B OF C

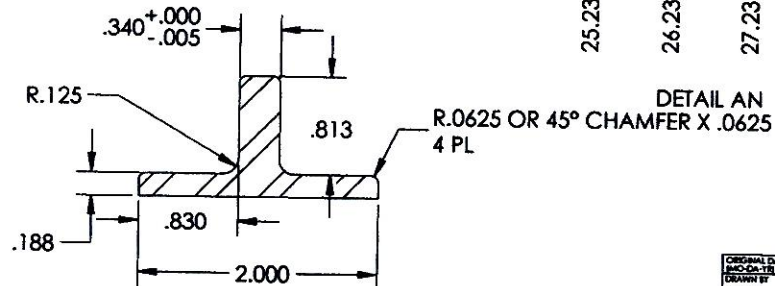
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DETAIL AM



DETAIL AN



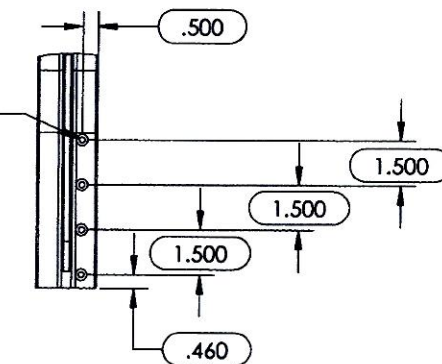
SECTION AR-AR

ORIGINAL DATE: 09-10-09		APICAL INDUSTRIES	
DRAWN BY: D.BANKER		2608 TEMPLE HEIGHTS DR.	
CHECKED BY: P. BALVO		OCEANSIDE, CA. 92056-3512 (760)724-5300	
DESIGNED APPROVAL: P. BALVO		DEFLECTORS	
CONTRACT NO.:		REV. C	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS: ±.01 3 PLACE DECIMALS: ±.005 ANGLES: ±.2°		CAGE CODE: 647.3900	
SCALE: NONE		SHEET 9 OF 12	

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4X $\phi .196 \pm .010$ THRU ALL
✓ $\phi .385 \pm .020 \times 100^\circ \pm 1.000^\circ$



DETAIL AK

647.3915

ORIGINAL DATE
10-04-1981 09:30-09
DRAWN BY
D.SCHUB
CHECKED BY
D.BANDER
DRAWING APPROVAL
P. BAIRD
DATE
10-04-1981

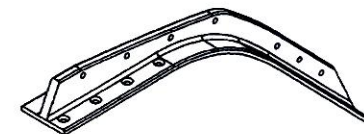
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
2 PLACE DECIMALS ±.01
3 PLACE DECIMALS ±.005
ANGLES ±.5°

APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760)724-5300

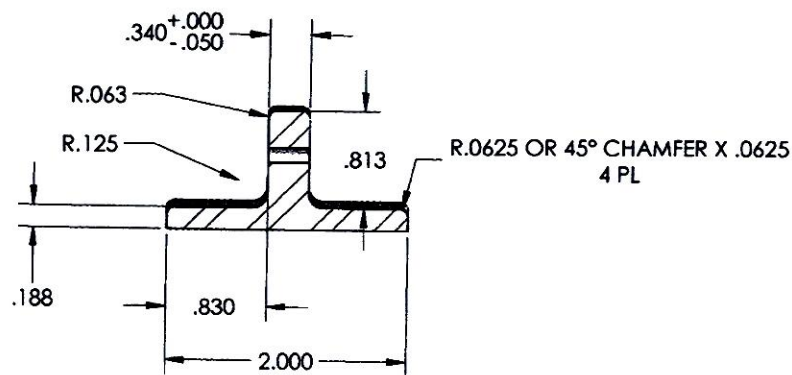
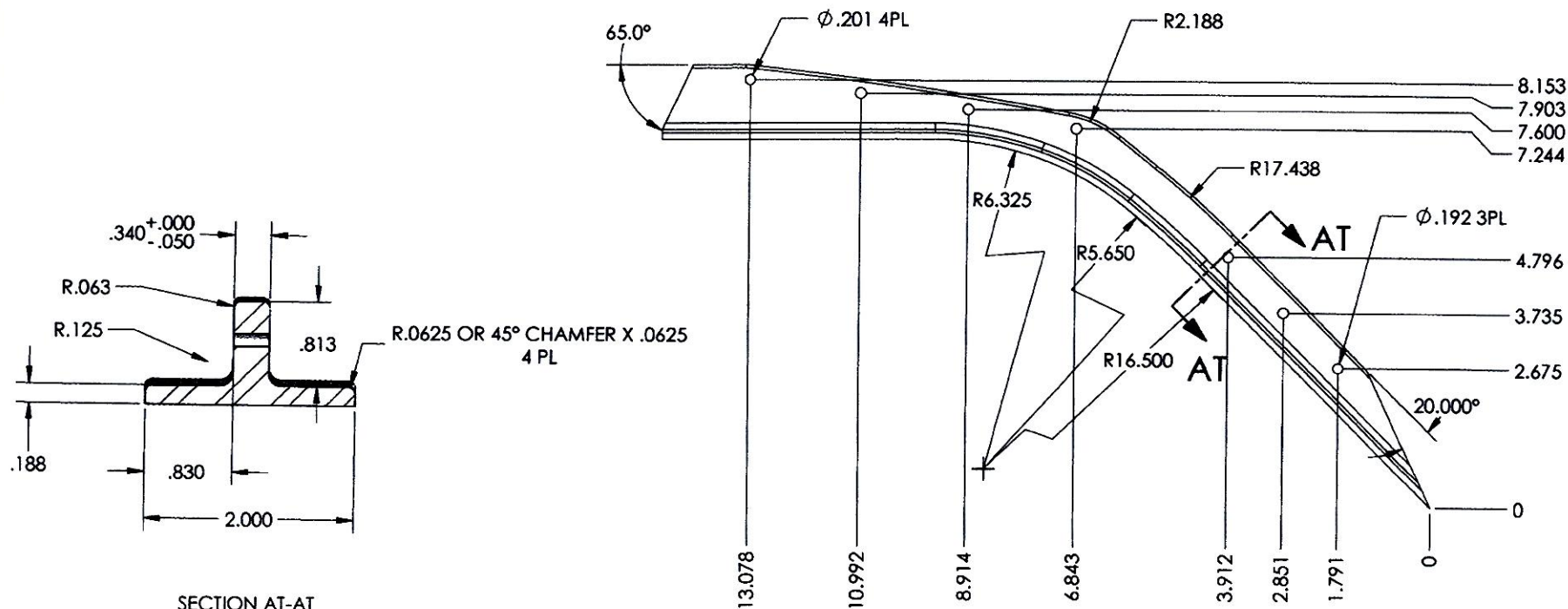
DEFLECTORS

SHEET	CHG CODE	DRG. NO.	REV
B	07M26	647.3900	C
SCALE NONE			SHEET 10 OF 12

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647.3916



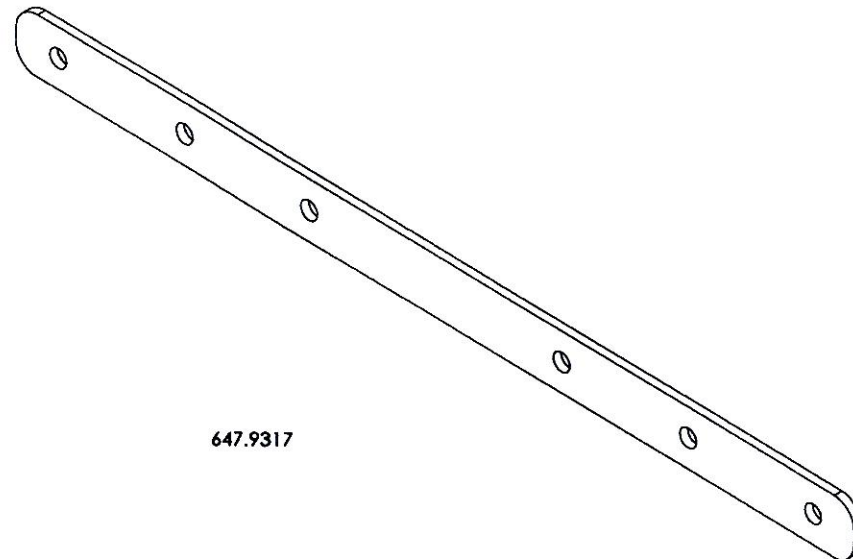
SECTION AT-AT

ORIGINAL DATE JAN-24-78		BY: J.P. 10-07	
DRAWN BY: D. SCHUR		CHECKER: D. BARKER	
DRAWING APPROVAL P. BRAVO		RELEASE	
CONTRACT NO.			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°			
REV	DATE CODE	DWG. NO.	REV.
B	07/22/6	647.3900	C
SCALE NONE		SHEET 11 OF 12	

APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760)724-5300

DEFLECTORS

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R.250
4 PL

.625

0

.500

2.000

3.500

6.500

8.000

9.500

10.000

.090

Ø.196
6 PL

ORIGINAL DATE 04-24-79 09:10:00		APICAL INDUSTRIES	
DRAWN BY C. CHEN		2608 TEMPLE HEIGHTS DR.	
CHECKED BY D. BAKER		OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWING APPROVAL P. BRAY		DEFLECTORS	
CONTRACT NO.		REV. C	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.1°		SIZE B	QTY. NO. 647.3900
SCALE NONE		SHEET 12 OF 12	



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO36011**

Purchase Order Date 4/19/2017

PO Print Date 4/25/2017

Page Number 1 of 5

Order From :

A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE ROAD
ROCKLAND, ON K4K 1T2
CANADA

VC-ATG001

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone 613-446-4544

Ship To Contact

Ship To Phone

Ship Via:

VENDOR'S TRUCK

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

CAD

FOB

FCA - (Free Carrier)

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable CD Promise Date	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	158812	647.7611 LOWER DEFLECTOR REV. N/C	4/25/2017 Yes 4/25/2017	4.00	\$12.05	\$48.20
FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-PRF-23377 TYPE I CLASS N						
Line Total:						\$48.20
2	158496	647.3912 BREAKAWAY TIP REV. C	5/5/2017 Yes 5/5/2017	6.00	\$11.45	\$68.70
FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-PRF-23377 TYPE I CLASS N						
Line Total:						\$68.70
3	158883	647.3912 BREAKAWAY TIP REV. C	5/5/2017 Yes 5/5/2017	6.00	\$11.45	\$68.70
FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-PRF-23377 TYPE I CLASS N						

PO Instructions: PRIMER IS SUPPLIED BY DART

Note:

4/25/2017



A.T.G. Industries Inc.
731 Industrielle Street
Rockland, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 913270

Date: 05-May-17

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

Chantal Lavoie
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms		Ship Via	
		OUR TRUCK	
Quantity	Description		
	Please reference this document's Pack List number on all correspondences regarding this shipment. If you have any questions, please contact us.		
3 ea	Part: D5354-042 R66 Clamp Black Anodize per MIL-A-8625F, Type II, Class 2 Job: 20964		Rev: C PO: PO36011 Line: 10
6 ea	Part: D5355-041 Aft Clamp Black Anodize per MIL-A-8625F, Type II, Class 2 Job: 20965		Rev: C PO: PO36011 Line: 11
8 ea	Part: 647.7910 Angle bracket Hard Black Anodize per MIL-A-8625F, Type III, Class 2 Job: 20966		Rev: N/C PO: PO36011 Line: 12
1 ea	Part: ADMINISTRATION FEE Administrative Fee Job: 20967		Rev: N/A PO: PO36011 Line: 13
6 ea	Part: 647.3912 Breakaway Tip Hard Black Anodize per MIL-A-8625F, Type III, Class 2 Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied) Job: 20956		Rev: C PO: PO36011 Line: 2
6 ea	Part: 647.3912 Breakaway Tip Hard Black Anodize per MIL-A-8625F, Type III, Class 2 Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied) Job: 20957		Rev: C PO: PO36011 Line: 3
6	Part: 647.3914		Rev: C
Made in Canada.			

8017-5-11



A.T.G. Industries Inc.
731 Industrielle Street
Rockland, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 913270

Date: 05-May-17

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

Chantal Lavoie
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms		Ship Via
		OUR TRUCK
Quantity	Description	
	Date: <u>05/05/2017</u>	
	Certified Signature: <u>[Signature]</u>	
	Receiver Signature: <u>SP175-11</u>	
	A.T.G Industries Inc. is AS9100 Registered and Nadcap Chemical Processing Accredited.	
	Note: This Packing Slip may contain parts that have been PLATED. Items that are plated may be subject to natural tarnishing and it is suggested that they be inspected within 24 hours of receipt.	
	Made in Canada.	